

REMARKS

The Office Action dated May 5, 2005, has been received and carefully noted. The attached Terminal Disclaimer, the above amendments and the following remarks are submitted as a full and complete response thereto.

Claims 1-6 are pending in this application. By this Amendment, claims 5 and 6 are amended. No new matter is added.

Allowable Subject Matter

The Office Action rejects claims 1-6 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-6 of U.S. Patent No. 6,692,809. Applicants have filed herewith a Terminal Disclaimer over U.S. Patent No. 6,692,809. Thus, it is respectfully submitted that this rejection is rendered moot. Reconsideration and withdrawal of the rejection of claims 1-6 under the judicially created doctrine of obviousness-type double patenting are thus respectfully requested.

CLAIM OBJECTIONS

The Office Action objects to claims 5-6 for containing asserted informalities. Applicants believe that these objections are overcome with the above amendments to claims 5-6. Thus, reconsideration and withdrawal of the objections to claims 5-6 are respectfully requested.

Double Patenting

The Office Action rejects claims 1-4 under 35 U.S.C §103 (a) as being obvious over Abiko et al. (European Patent Publication No.1143430), in view of Fujii et al (US Patent Publication No. 2003/0143342), and further in view of Nakayama et al. (U.S. Patent No. 5,822,286). The Office Action also similarly rejects claims 1-4 under 35 U.S.C §103 (a) as being obvious over the combination of Abiko et al. in view of Fujii et al, in view of Nakayama et al, and further in view of Miyamoto et al. (U.S. Patent No. 5,805,565). The Office Action also similarly rejects claims 1-6 under 35 U.S.C §103 (a) as being obvious over the combination of Abiko et in view of Fujii et al in view of Nakayama et al, in view of Miyamoto et al, and further in view of Uno et al. (U.S. Patent No. 6,503,690). These rejections are traversed.

An object of the present invention is to provide an improved rewritable optical disc capable of high-speed recording but remaining compatible with the existing DVD-RW standard, by optimizing the compositions of recording layer and reflective layer, the thickness of dielectric (barrier) layer, and the depths of grooves and land pre-pits.

The most important feature of the present invention, as recited in the last paragraph of claim 1, is that the grooves have a width ranging from 200 to 350 nm and a depth ranging from 25 to 50 nm, and the land pre-pits have a depth in a range of plus-minus 3 nm relative to the depth of the grooves.

With the use of the above features of the present invention, it is possible to achieve the following advantage. Namely, during a high-speed information reproduction, signals obtained from the land pre-pits will not interfere with RF

reproduction signals obtained from the grooves, so that there will not be any reproduction errors possibly caused due to noise contained in the RF signals. In this way, it is possible to greatly reduce adverse effects of land pre-pits, thus ensuring that the generation of high quality RF reproduction signals is possible even during a high-speed reproduction.

Abiko tries to realize a high speed recording, indicating the same object as the present invention. However, the composition of reflective layer and the depths of pits and grooves in Abiko are all different from those of the present invention (Abiko's pit depth is equal to its groove depth.)

Fujii relates to a reflective film for use in a liquid crystal display, which has nothing to do with an optical disc (the present invention relates to an optical disc). Therefore, Fujii teaches nothing about the structure and composition of the optical disc of the present invention.

Nakayama discloses (in Fig.2) an arrangement of pre-pits in an area where grooves are not present, thus failing to teach the present invention (pre-pits are arranged in land portions between grooves.)

Since Nakayama does not have an arrangement (pre-pits are arranged in land portions between grooves), there is not any interference caused by pre-pits on recorded signals. The present invention is different from Nakayama, since the present invention has such an arrangement (pre-pits are arranged in land portions between grooves), and it is important to establish an appropriate relationship between the depth of pre-pits and the depth of grooves in order to avoid any interference caused by pre-pits on recorded signals.

In any case, Abiko only discloses shallow grooves having a depth of 30-40 nm, and Nakayama discloses deep grooved having a depth of 90-100 nm. Although Nakayama briefly discusses a relationship between groove depth and pit depth, it teaches nothing about width range and depth range of grooves and depth range of pre-pits as required in claim 1 of the present application.

Accordingly, Applicants submit that it would not have been easy for one of ordinary skill in the art to achieve the presently claimed invention (capable of producing the above-discussed advantage) claimed in claim 1 simply by combining Nakayama with Abiko and/or other cited prior art references.

In view of the above, since various numerical limitations recited in claim 1 are quite specific and in fact neither disclosed nor inherently taught by the cited prior art references (alone or in combination), it is respectfully submitted that claim 1 and its dependent claim 2-6 are in condition for allowance.

For at least the above reasons, Applicants respectfully request reconsideration and withdrawal of the rejections under 35 U.S.C. § 103(a).

Conclusion

Applicants respectfully submit that this application is in condition for allowance and such action is earnestly solicited. If the Examiner believes that anything further is desirable in order to place this application in even better condition for allowance, the Examiner is requested to contact the Applicants' undersigned representative at the telephone number listed below to schedule a personal or telephone interview to discuss any remaining issues.

In the event that this paper is not being timely filed, Applicants respectfully petition for an appropriate extension of time. Any additional fees may be charged to counsel's Deposit Account No. 01-2300, referencing attorney docket number 107156-00196.

Respectfully submitted,

A handwritten signature in black ink, reading "Robert K. Carpenter". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

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